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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/908,973

07/20/2001

Shunzou Ohshima

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3532

7590

02/18/2004

Finnegan, Henderson, Farabow,  
Garrett & Dunner, L.L.P.  
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Washington, DC 20005-3315

EXAMINER

KITOV, ZEEV

ART UNIT

PAPER NUMBER

2836

DATE MAILED: 02/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/908,973

Applicant(s)

OHSHIMA, SHUNZOU

Examiner

Zeev Kitov

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 July 2001.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 24 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1 - 24 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 20 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

1. Claims 1 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A reason for that is a following statement of the claims: "a constant component current ( $I_{refc}$ ) and a transient component current ( $I_{ref t}$ ) to the reference PET (QB) such that a source potential (VSA) of the main FET (QA) obtained when a load current (ID) flowing the main PET (QA) is not within the range of an over-current containing a transient component is not lower than a source potential (VSB) of the reference FET (QB) (emphasis added)". A meaning of the underlined phrase is obscure, because there is no logic connection between the first part and the second part of the sentence.
2. Claims 19, 22, 23 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A reason for that is that the Claims 19, 22 and 23, while claiming the shutdown method are being dependent on the Claims 5, 1 and 10, which claim apparatus. Since it is totally unclear, what are the limitations

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implied by these references, examination of the Claims 19, 22, 23 and 24 couldn't be conducted.

3. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A reason for that is a following statement of the claim:

"wherein the repetition of the ON/OFF operation is that the voltage comparator (CMP1) detects that the source potential (VSA) of the main FET is the source potential (VSB) of the reference FET", which meaning is unclear.

4. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A reason for that is in a following statement of the claim:

"wherein the transient component circuit (13) feeding the transient component current (I<sub>left</sub>) is that the transient component circuit (13) is fed at the first predetermined time and at the predetermined current value". First, due to its bad grammar, a general meaning of the sentence is not clear. Second, it is particularly unclear, how the circuit (13) can be fed "at the first predetermined time and at the predetermined current value", because none of Fig. 1, 2 or 12 includes a structure capable to feed the circuit for limited time by predetermined current. According to Fig. 1, 2 and 12 of the Drawings, the circuit (13) is fed by a permanent voltage provided by the VB battery.

5. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A reason for that is in a following sentence of the claim: "a

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step C of the reference current ( $I_{ref}$ ) vibrating by detecting in the step B". It is totally unclear, how the vibrating can be done by any detection.

6. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A reason for that is in a following statement of the claim: "the starting time interval" with reference to Claim 15, while Claim 15 recites: "repeating the start of feeding the transient component current ( $I_{left}$ )". It is not clear from the claim language, whether the starting time interval is duration of feeding or time interval between feeding pulses.

7. Claim 4 recites the limitation "the starting time interval" in line 27, page 36. There is insufficient antecedent basis for this limitation in the claim.

8. Claim 12 recites the limitation "the determined first time" in line 16, page 38. There is insufficient antecedent basis for this limitation in the claim.

9. The claims are generally narrative and indefinite, failing to conform to current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Due to multiple grammatical and idiomatic errors, this case in its current form cannot be examined against a prior art.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the FET(QA) and the

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FET(QB) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "14" in Fig. 12 has been used to designate both 4-pulse counter and resistor R6. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Objections***

1. The disclosure is objected to under 37 CFR 1.71, as being so incomprehensible as to preclude a reasonable search of the prior art by the examiner. For example, a meaning of the following phrases is totally unclear:

- a) "However, there has been a problem that response properties caused by microcomputer control is impaired respect to such over-current" (page 2, lines 22 – 23).
- b) "The device 1 has counters (4, 14) for counting the vibration number of times of the reference current ( $I_{ref}$ ) to a predetermined number of times by detecting that this voltage comparator (CMP1) is low" (page 6, lines 15 - 17).

c) "The third predetermined time is set as a time capable of detecting a next generated over-current which starts when and after the last over-current has been detected while the over-current detection number of times is counted" (page 7, lines 2 – 5).

Applicant is required to submit an amendment, which clarifies the disclosure so that the examiner may make a proper comparison of the invention with the prior art.

Applicant should be careful not to introduce any new matter into the disclosure (i.e., matter which is not supported by the disclosure as originally filed).

2. The Specification is further objected to due to following reason:

The spacing of the lines of the specification is such as to make reading and entry of amendments difficult. New application papers with lines double spaced on good quality paper are required.

The Supplemental Specification rewritten in a proper idiomatic English is required. No new matter should be added.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zeev Kitov whose current telephone number is (571) 272 - 2052. The examiner can normally be reached on 8:00 – 4:30. If attempts to reach examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571) 272 – 2800, Ext. 36. The fax phone number for organization where this application or proceedings is assigned is (703) 872-9306 for all communications.

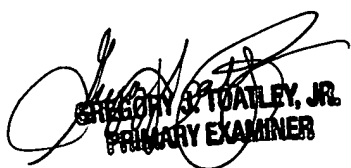
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Z.K.

02/11/2004

  
GREGORY A. TOATLEY, JR.  
PRIMARY EXAMINER